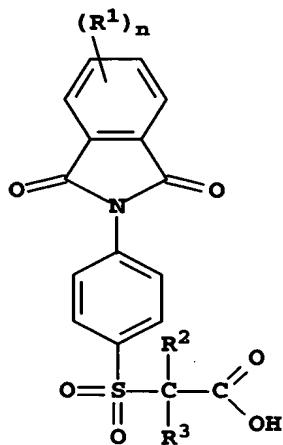


CLAIMS:

1. A photothermographic element comprising a support having thereon at least one coatable light-sensitive imaging layer and at least one layer comprising an effective amount of a base precursor comprising the salt of an organic base with an arylsulfonylacetic acid having the following structure:



wherein each of R² and R³ is a monovalent group selected from the group consisting of hydrogen, an alkyl group, an alkenyl group, a cycloalkyl group, an aralkyl group, an aryl group and a heterocyclic group, wherein each of the monovalent groups may have one or more substituent groups;

the subscript n is 1 to 4 and each of the R¹ groups may be independently selected from one or more substituent groups.

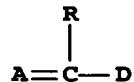
2. The photothermographic element of claim 1 wherein said base precursor is in bleaching association with a filter dye.

3. The photothermographic element of claim 2 wherein said filter dye and said base precursor are both in a coatable light-absorbing layer.

4. The photothermographic element of claim 1 wherein said base precursor is in association with one or more blocked photographically useful compounds, and the base precursor is capable of promoting the unblocking of said one or more blocked photographically useful compounds.

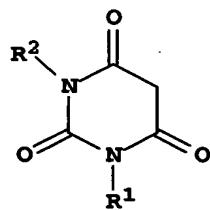
5. The photothermographic element of claim 2 wherein the dye is a barbituric acid arylidene filter dye.

6. The photothermographic element of claim 5 wherein the arylidene filter dye is represented by the following formula:



wherein A comprises an acidic nucleus, comprising a cyclic ketomethylene moiety; D contains an aryl or heterocyclic moiety which may be substituted or fused, and R represents hydrogen, an aryl group containing 6 to 14 carbon atoms, or an alkyl group containing 1 to 12 carbon atoms which groups may optionally be substituted.

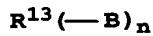
7. The photothermographic element of claim 6 wherein the A group is represented by the following structure:



wherein R¹ and R² each individually represent a hydrogen, an alkyl, aryl, aralkyl, heterocyclic or cycloalkyl group, which groups that can be substituted or unsubstituted.

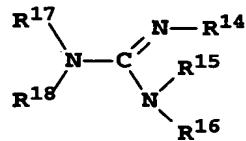
8. The photothermographic element of claim 2 wherein the base precursor is capable of reacting with the dye at a temperature higher than 80°C.

9. The photothermographic element of claim 1 wherein the organic base is a diacidic to tetraacidic base having the following Structure:



wherein R¹³ is an n-valent residue of a hydrocarbon or heterocyclic ring, each of which may have one or more substituent groups; "n" is an integer of 2 to 4;

and wherein "B" is a monovalent group corresponding to an atomic group formed by removing one hydrogen atom from a guanidine having the Structure:



wherein each of R¹⁴, R¹⁵, R¹⁶, R¹⁷ and R¹⁸ are independently a monovalent group selected from the group consisting of hydrogen, an alkyl group, an alkenyl group, an alkynyl group, a cycloalkyl group, an aralkyl group, an aryl group and a heterocyclic group, wherein each of the monovalent groups may have one or more substituent groups; or any two of R¹⁴, R¹⁵, R¹⁶, R¹⁷ and R¹⁸ may be combined together to form a five-membered or six-membered nitrogen containing heterocyclic ring.

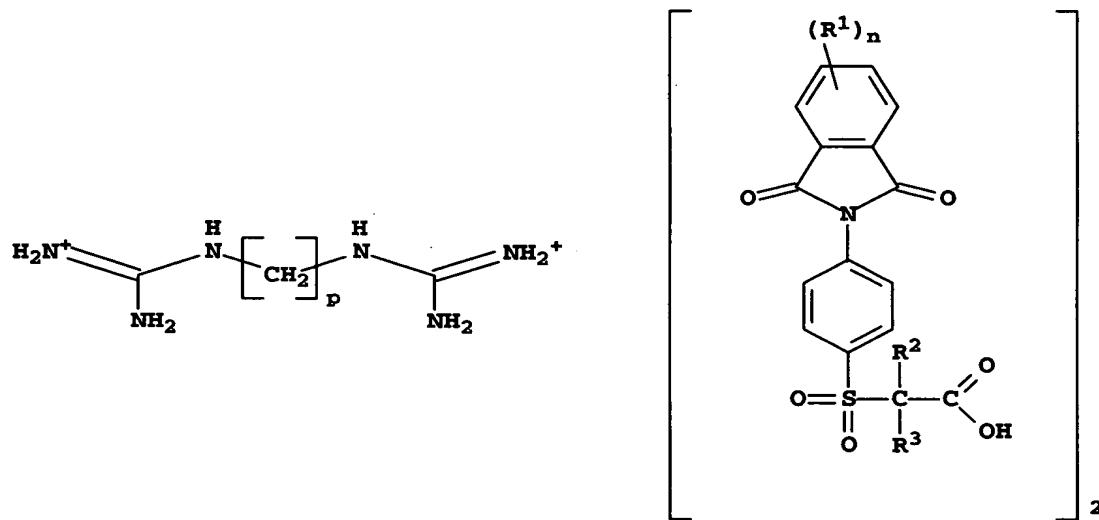
10. The photothermographic element of claim 9 wherein each of R¹⁴, R¹⁵, R¹⁶, R¹⁷ and R¹⁸ is hydrogen or an alkyl group.

11. The photothermographic element of claim 9 wherein n is 2.

12. The photothermographic element of claim 9 wherein R¹³ is an alkylene group or an arylene group, which may have one or more substituent groups.

13. The photothermographic element of claim 1 wherein the base precursor is a bisguanidine base precursor.

14. The photothermographic element of claim 1 wherein the base precursor is a bisguanidinium salt of an arylsulfonylacetic acid having the following formula:



wherein the subscript n is 1 to 4, wherein p is 2, 3 or 4; the groups R² and R³ are independently a hydrogen or a substituted or unsubstituted alkyl or aryl group; and the group R¹ is independently selected from hydrogen, an aryl, alkoxy, or an alkoxycarbonyl group.

15. The photothermographic element of claim 1 comprising, on the support, at least one light-sensitive silver halide emulsion layer and at least one light-absorbing non-light sensitive layer comprising said dye.

16. The photothermographic element of claim 2 wherein said filter dye is capable of becoming at least about 50% colorless within about 5 minutes upon heating to a temperature of at least about 90°C

17. A photothermographic element according to claim 1 wherein the photothermographic element contains an imaging layer comprising a blocked developer, a light-sensitive silver halide emulsion, and a non-light sensitive silver salt oxidizing agent.

18. A photothermographic element according to claim 1 comprising a mixture of at least two organic silver salts, at least one of which is a non-light sensitive silver salt oxidizing agent.

19. The photothermographic element of claim 1 comprising, on the support, at least three aqueous-coatable light-sensitive imaging layers which have their individual sensitivities in different wavelength regions and also an aqueous-coatable filter layer, below the imaging layers, comprising at least one antihalation dye in association with an effective amount of the base precursor, wherein said filter dye becomes at least about 50% colorless within about 5 minutes upon heating to a temperature of at least about 90°C.

20. A photothermographic process for preparing visible photographic images comprising the steps of:

(a) providing a photothermographic element as in claim 1 comprising, coating on the support, (i) at least one aqueous-coatable layer containing photosensitive silver halide, a water-insoluble organic silver salt as an oxidizing agent, a reducing agent for silver ion, and (ii) a aqueous-coatable light-absorbing layer comprising a filter dye in association with an effective amount of the base precursor; and

(b) thermally developing the film step without any externally applied developing agent, comprising heating said film to an average temperature of at least 90°C for at least 0.5 seconds, wherein said antihalation dye becomes at least about 50% colorless.